

Notice of Allowability

Application No.

10/784,126

Applicant(s)

KODAMA ET AL.

Examiner

Nitin Patel

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 2/20/2004.
2. ☒ The allowed claim(s) is/are 1-8.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date 2/20/2004
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.



REASON FOR ALLOWANCE

1. Claims 1-8 are allowed.
2. The following is an examiner's statement of reason for allowance:

The prior art fails to teach or suggest a writing device for performing writing with respect to color electronic paper which includes a microcapsule layer having microcapsules, whose colors change depending upon a direction of an electric field, arranged therein in a planar shape, the microcapsule layer including three types of microcapsules which are formed so as to be capable of displaying one color among three predetermined primary colors, respectively, the writing device for color electronic paper comprising: a writing head which has pixel electrodes and a counter electrode, which are arranged to be opposed to each other across the microcapsule layer, and performs electric field formation for each of the pixel electrodes with respect to the microcapsule layer according to image data; a color arrangement detector which detects an arrangement of the three types of microcapsules in the microcapsule layer; and an electric field controller which controls the electric field formation for each of the pixel electrodes on the basis of a result of the color arrangement detection by the color arrangement detector as claimed in claim 1.

The prior art fails to teach or suggest a writing device for color electronic paper which applies a voltage to color electronic paper with respective pixels formed of a plurality of encapsulating regions, which encapsulate charged particles or dispersion media colored in any one of a plurality of predetermined colors, and displays the color of the charged particles or dispersion media, which are encapsulated in the plurality of

encapsulating regions, on a display surface, the writing device for color electronic paper comprising: a first voltage applicator which applies a voltage to a predetermined region of the color electronic paper such that all the encapsulating regions in the predetermined region come into a color developed state; a color detector which detects which color of the plurality of colors is a color displayed on the display surface of the predetermined region when the voltage is applied by the first voltage applicator; and a second voltage applicator which applies a voltage to the predetermined region so as to control the color developed state of the respective encapsulating regions in the predetermined region on the basis of colors of respective pixels forming a display image, which is displayed in the predetermined region, and a result of detection of the color detector as claimed in claim 4.

The prior art fails to teach or suggest a writing method for color electronic paper which applies a voltage to color electronic paper with respective pixels formed of a plurality of encapsulating regions, which encapsulate charged particles or dispersion media colored in any one of a plurality of predetermined colors, and displays the color of the charged particles or dispersion media, which are encapsulated in the plurality of encapsulating regions, on a display surface, the writing method for color electronic paper comprising: applying a voltage to a predetermined region of the color electronic paper such that all the encapsulating regions in the predetermined region come into a color developed state; detecting which color of the plurality of colors is displayed on the display surface of the predetermined region when the voltage is applied; and applying a voltage to the predetermined region so as to control the color developed state of the

respective encapsulating regions in the predetermined region on the basis of a result of the detection and colors of respective pixels forming a display image, which is displayed in the predetermined region as claimed in claim 8.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nitin Patel whose telephone number is 571-272-7677.

The examiner can normally be reached on 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin H. Shalwala can be reached on 571-272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nitin Patel
Examiner
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